THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

Vol. LXIV. Thursday, July 18, 1861. No. 24.

RESEARCHES UPON THE NATURE AND TREATMENT OF ASTHMA.

By Dr. Duclos (of Tours), Physician of the Hospital St. Gatien.

(Concluded from page 490.)

The attack lasts the usual time, diminishing without entirely ceasing; then the inflammatory condition of the nasal mucous membrane takes place again, followed again by a new attack of asthma, and the same scene is repeated again in this way many days, and even weeks, always with paroxysms repeated at periodical, somewhat irregular intervals; between which the return to the normal condition is not absolutely perfect.

Each termination of a paroxysm is marked by an abundant secretion of ropy mucous matter, generally thicker and more catarrhal, as the disease approaches its termination. Every return of a paroxysm, on the contrary, is characterized by the suspension for some hours of this mucous exudation. Lastly, in its last stages, the disease is nearly continuous, the catarrhal condition becomes predominant, and takes upon itself the whole affection.

Let us analyze this phenomenon. What do we find in it?

An inflammatory condition of the nasal mucous membrane, extending rapidly to the trachea and bronchia, and producing there symptoms, characteristic of the locality attacked; successive inflammatory attacks, which produce each time a recrudescence, a more or less marked increase of these symptoms, and a more or less abundant secretion from the membranes attacked, and by the nature and quantity of which the more or less advanced period of the disease can be generally ascertained.

What is all this, if not a very exact description of an attack of acute eczema? only modified by its locality. This cannot be doubted. Asthma is nothing else than a bronchial pruritus, and the intermittent paroxysms are nothing else than the intermittent eruptions of a dartrous nature.

I have adduced the two principal types—to wit, eczema and urticaria—and have compared them. But it can be readily supposed that varieties of them are possible, shades between the two conditions. Urticaria, reduced to a simple itching, without any eruption, is it not an attack of dry asthma without any secretion, and of several hours duration? Is not eczema, with abundant secretion, and successively repeated, moist asthma of long duration, with copious expectoration?

In viewing asthma in this light, I am not attempting to lay down a fact without analogy in pathology. Are not all the mucous membranes frequently attacked by herpetic eruptions? Are not ophthalmia, angina, enteritis, cystitis, frequent manifestations of acute eczematous affections? Daily observation demonstrates this, and every day the important role which the herpetic diathesis plays in the production of so-called inflammations is made manifest.

If the preceding reflections are true—and they are, to my mind, incontestable—it is not in the nervous element, or, in other words, an unknown one, that the cause of the periodicity of these attacks of asthma, and the intermissions of its dyspnœa, are to be found. The dyspnœa is intermittent, because the herpetic eruptions are naturally intermittent and periodic.

Let us resume, then, all these considerations in repeating; asthma is an acute herpetic affection of the respiratory passages.

The nature of asthma being once established, it seems to me that its therapeutics would become simpler, easier, and more certain. I mean here prophylactic treatment of long duration, directed against the essence of the disease and destined to prevent the return of the attacks, and not of medication proper to each crisis, palliative treatment and of little efficacy.

In reading attentively what the authors of the most valuable monographs have written about asthma, I have been struck by the observation of how little weight was attached by them to prophylactic treatment. Hardly any important therapeutical indications were noticed, excepting those relating to hygienic measures; and—a very remarkable circumstance—a great number, repeating faithfully and with respect the errors of their predecessors, attribute a favorable influence to hygienic conditions more calculated to produce than to prevent a return of asthma. Thus, authors, so sagacious in other respects, recommend warm climates and insist upon the benefit to be derived from warm weather, although it has been generally observed that genuine asthma, the only one we are describing, is a disease of warm climates and weather.

How many similar errors I have met with, in regard to this disease! how many authors I have met with, who did not suspect what Hippocrates has, however, indicated—namely, that asthma is observed even frequently in infancy! How few are willing to appreciate to what degree asthma is a disease, free in its gyrations, and independent of every hygienic condition to which we pretend to submit it! And as to the preventive treatment, it is almost always passed over in silence. A paroxysm comes; an effort is made to aid in its cure; sometimes even the credit is claimed of having largely contributed to it; but no active treatment is adopted to prevent the return of another attack. This inaction, based upon the perfect uncertainty prevailing with regard to the nature of asthma, is to be regretted. The paroxysm passed, the morbid element we had to combat was not much known. Nothing was done, because practitioners did not know what to do, and they did not wish to institute an useless treatment.

That was my view of the subject until my opinion upon the nature of the disease was well formed. I then thought, that if asthma is an herpetic affection, and if the manifestation in the bronchia of a dartrous diathesis be true, the return of it ought to be prevented by the means which are commonly employed to prevent the return of dartrous cutaneous eruptions. The preventive medication had from that time a basis; it reposed upon a theory, the truth of which was demonstrated to me. It became earnest experiment, instead of a blind empiricism.

Now, I had seen that of all the means calculated to modify the herpetic diathesis and prevent the reproduction of its cutaneous manifestations, those upon which the most reliance was to be placed were preparations of sulphur and arsenic. I then said to myself, I will give, first, the preparations of sulphur, the least offensive method, of easiest administration, and free from all danger; and in case they do not succeed, I will treat obstinate cases with the arsenical preparations. Of the preparations of sulphur, the sulphurous mineral springs, especially those of Barėges, Bonnes and Cautérets, were the first that suggested themselves to my mind. These three had frequently, in my practice, produced such astonishing results in the treatment of cutaneous affections, granular anginas, herpetic diseases of the neck of the uterus, and those of Bonnes in some cases of chronic diarrhœa, that I thought I could rely upon their effect. My surprise was great to find them of no value at all.

I was at that point, already some years since, when a patient, affected with asthma, came to me to ask to be submitted to a course of treatment which had cured him of this cruel disease. He told me that for many years he had taken fifty centigrammes to one gramme of flowers of sulphur, sulphur sublimatum et lotum, every morning for twenty days in the month at first, and afterwards ten days only, and that he had been radically cured for many years—so completely cured, that he could take cold without the re-appearance of asthma! It can be readily conjectured that I authorized the patient to do so, and earnestly entreated him to follow this treatment. Nothing could please me more.

I had too fixed notions that the choice of the preparations of sulphur was not a matter of indifference, and that the action of sulphur sublimatum was not identical with that of Eaux Bonnes, Baréges, Cautérets or Saint Sauveur. I was too much convinced, that there are in the materia medica analogous substances, but that they cannot be substituted for each other. The sulphur sublimatum did not appear to me more like the sulphurous water, than cinchona was like quinia, or morphia like laudanum. That was, then, a new remedy to try. I did so, and the more willingly, as it could not produce any danger.

Now, from all the facts observed and trials made, I formed this conclusion, that sulphur lotum is a wonderfully powerful remedy as a preventive of asthma. All the cases in which I administered it have been modified; a certain number entirely cured.

The way I administer it, is this. I prescribe the sulphur lotum in the daily dose of fifty centigrammes to one gramme, according to the age of the patient, to be taken once a day, in the morning before breakfast or at breakfast. This dose is continued for five or six months, twenty days every month; then for one year, eighteen months or two years, ten days only a month. It is impossible to imagine a simpler or more practical treatment. The remedy is well supported by the stomach, as a general thing; it produces neither vomiting, diarrhœa, nor constipation. It seldom affects the bowels, and in very rare cases where it produces purgation, a combination of a small quantity of opium with it soon controls its bad effects. The sulphur lotum does not mix readily with water, in consequence of its lightness, and on that account water should be added gradually, drop by drop; or the remedy could be taken with a little confiture or a spoonful of soup.

I have obtained from this treatment what I do not hesitate to call very remarkable results. I should like to give here the details of some cases which are very conclusive. I shall confine myself to two, which seem to me as complete as possible. The cases were those of hereditary asthma, the importance of which no physician can undervalue.

Obs. I.—Mlle. M. G.; her mother had had a great many attacks of asthma, and some of them of very great intensity. Her early infancy was generally healthy, excepting notable susceptibility of the throat and frequent small furfuraceous eruptions on the face and scalp. At the age of 7, she had an acute affection of the bronchia, which forcibly struck my attention. Suddenly a considerable oppression manifested itself, with a very decided laryngo-tracheal wheezing, without, however, great alteration of the voice; no dulness on percussion, and on auscultation the sibilant and mucous rales peculiar to asthma. Every evening the oppression is increased, and the paroxysm becomes more violent. The child cannot breathe, unless she is sitting up in bed. This condition continued for many days, in spite of an active medication, and was terminated by an abundant secretion of a slimy and ropy mucus. Similar attacks recurred every month, six weeks, or two or three months; the most of them commencing by a very painful coryza and insupportable sneezing. Generally, they seemed to be reproduced by exposure to cold. I noticed that after a certain time, six or seven months, there remained an habitual oppression in the interval, an oppression so great that going up stairs or walking quickly were extremely painful.

As the paroxysms increased in numbers, so they gained in intensity, and each succeeding one became a new source of anxiety for the family, which I have had difficulty in allaying. A pneumonia complicated this, and a very energetic treatment became necessary—digitalis in a large dose, kermes, also in a large dose, and lastly numerous flying blisters. The pneumonia is completely cured, not without much difficulty, but with its cessation the paroxysms of asthma are not arrested. An attack of asthma took place three months after the pneumonia, followed very soon by other attacks equally intense and frequent as before, and an habitual oppression between these attacks, which did not exist at first. M. Louis was consulted at Paris, and diagnosed, as I had done, a pulmonary emphysema, and which I had seen developed consecutively to the paroxysms of asthma.

All treatment failing, I advised her to try for a season the waters of Mount Dor. The child was carried there; she was examined by the worthy and able Dr. Bertrand, who discovered the existence of asthma, and made her follow the thermal medication with the greatest care. The water of Mount Dor was also taken at home for some months after the child was brought back to Tours. The water of Mount Dor has been incontestably the most efficacious of all the remedies employed. The paroxysms ceased entirely for some months, the oppression of breathing disappeared, and the return to health was nearly perfect. But very soon a new attack came on, and it paved the way for fresh paroxysms of great intensity. It was then that the mother of the child spoke to me of the use of the flowers of sulphur, a remedy which I had already spoken to her about, and which had been recommended to her by a person, himself cured of this cruel disease.

The medication was immediately commenced, about two and a half years ago. For one month, the child, then about 11 years of age, took every morning a dose of fifty centigrammes. Then she stopped for fifteen days. She takes it again for one month, in the same way and dose, and stops fifteen days. Takes it a month, then stops one month. She has taken it regularly, although from time to time many circumstances have interrupted the use of it, such as the indisposition of the child or relations, and many journeys.

Now this is what took place. and appeared to me to be very remarkable, and to which I would most particularly call the attention of practitioners. There cannot be said to have been really a single paroxysm of asthma from the first day of treatment, neither has the child the least habitual oppression. She goes up a long flight of stairs without difficulty; she runs and walks rapidly; and, lastly, an important point, she has had many colds, and even violent ones, without the recurrence of asthma, oppression, wheezing or any râles, peculiar to asthma. She does not look like the child she was.

Here is, if I am not mistaken, a singularly conclusive fact. Let us give a synopsis of it in a few words.

An hereditary asthma, repeated attacks of which produced pulmonary emphysema; all treatment, including residence at Mount Dor, perfectly ineffectual; the asthma continues in its most perfect and incontestable form. The administration of sulphur sublimatum et lotum was commenced, and for two years and a half not a single attack occurred; the emphysema disappeared with the causes which produced it. The child takes cold with impunity, as far as the asthma is concerned.

Persons may explain this, as they will; but it is, if I am not mistaken, a singularly significant fact.

The following observation seems to me not the less conclusive.

Obs. II.—M'me X., aged 38; father asthmatic; childhood generally good (as far as disease was concerned); never was the cause of anxiety about her chest. She took cold pretty easily, but the colds were never of great intensity or persistence. Never had pleurisy, pneumonia, or hæmoptysis. She had a long time, on her scalp, a furfuraceous eruption which I judged, from the description of it, to have been pityriasis. The patient told me that about five years ago, when she had a cold in the head, she was taken with an attack of difficult respiration. The disease made its appearance in the middle of the night, the rest of which she passed in a sitting posture. and she was perfectly unable to lie down. All sorts of musical sounds, she told me, were heard in the chest. The physician called, announced to her that she had a violent paroxysm of asthma. He prescribed a potion, strong mustard foot bath, and made her smoke cigars of datura stramonium. From this period the attacks were repeated from time to time for some days; during the hot weather, the patient rarely went over six weeks without having an attack; in the winter she had only one or two. In the intervals of the attacks, her general health was good, and the respiration was normal, excepting that she occasionally experienced a little difficulty in going up stairs or walking fast. At every new attack, the same treatment, mustard, &c., were prescribed. The employment of all these means produced a certain result, but a very insufficient one.

At this time I was consulted, about the middle of January, 1859. I examined the patient, and I observed the perfect integrity of the pulmonary organs. No abnormal sound, either on auscultation or percussion, except, perhaps, a little emphysema. I say, perhaps, for the symptom on which I founded this opinion, was not perceived at the following auscultation. Nothing the matter with the heart. I prescribed fifty centigrammes of sulphur, twenty days in each month, to be taken in the morning; continue this treatment even during the paroxysms, if any should take place; and also to take during the paroxysms, for three consecutive days, tinct. jalap. comp. in dose sufficient to produce a purgative effect. This is the result.

During the winter of 1859, no paroxysm. During the whole of the year 1859, only a very light one of three days in June, and a still lighter one of two nights and one day in August. The two attacks were so feeble, that the patient has not kept her chamber or called her physician, and did not think it necessary to use the purgative medicine I prescribed.

From that time, during the winter of 1859–60, and summer of 1860, not a single one. The patient had a cold in September, 1860, without oppression or any of the characters of asthma. During the whole of the very rainy summer of 1860, and the winter, which has been so bad up to the present time, she has not had the slightest attack. The use of the sulphur has been continued with the greatest regularity. It is really impossible not to be struck by the effect of treatment in this case.

I am certainly disposed, probably more than most physicians, to attribute a great share to nature in the success of our therapeutics. But here, the effect of the remedy is too distinctly appreciable not to admit it.

Let us resume, then, in saying that sulphur, properly and for a long time administered, constitutes an excellent preventive of asthma.

Should the same treatment be instituted when a paroxysm is present? I cannot say that it should be; I do not know. But I am indebted to the kindness of my colleague, M. Brévault de Loches, for the knowledge of a case; the patient being a man past middle life, in which a paroxysm has been quickly arrested by this valuable remedy. My attention will be directed to this point. I shall observe it closely, and if the attention of the profession should be turned to it, the question will be very soon settled.

There are, however, cases in which sulphur has entirely failed, without usefully modifying the asthma, or at least without diminishing the frequency of the attacks. I prescribed it in the same way and dose, without obtaining any result. I have assimilated these facts with those which take place in the dartrous affection of the cutaneous system. I have seen cutaneous affections a great many times resist the ordinary treatment, and require the employment of other remedies.

On reflection, I thought, if these asthmas are obstinate in the same manner as are those persistent dartrous affections of the skin, I will combat them in the same way, by application of a blister kept open for a long time, and the internal use of arsenic.

Why a blister? I well know that the action of this has been contested. I have not forgotten the discussion at the Academy on this subject. But there is one, whose authority is greater still; and that one very little addicted to talking, but very practical—the almost entire body of our confrères, who do not hesitate to apply a permanent blister. I have done so, and found the advantage of it.

As to the choice of preparations of arsenic, I prefer Fowler's solution. It is easy to administer by drops, and its effects are more certain than Asiatic pills. The following is my method of administering it. For twenty days every month, the patient to make use of the liquor, at first in the dose of two drops morning and evening, increasing the dose gradually to six drops morning and evening. Tolerance is established pretty well and quickly, generally, without the necessity of facilitating it by the addition of any other medicaments. After three months, instead of intermitting it for only ten days, I leave it off for one month, and even in the course of treatment if any painful symptom manifests itself by its topical action on the stomach.

The treatment thus managed gave me unhoped-for results in two cases, which I shall never forget; and a less complete result in another, in which I did not at first suspect the existence of asthma, in consequence of its being masked by the predominant catarrhal elements of the disease. I recommend it, then, to the attention of practitioners, being very firmly convinced that it is a powerful remedy against asthmas the most inveterate and rebellious to all kinds of treatment.

Is this saying that asthma is a disease which can be always cured? I most certainly do not mean this, nor do I think that treatment in any disease enjoys the privilege of curing every case that occurs. All that I have wished to prove in this article, are the following propositions:—

1st, Asthma is only a manifestation of the herpetic diathesis in the respiratory passages.

2d, In ordinary cases, the use of sulphur sublimatum constitutes an energetic preventive treatment.

3d, In graver and more inveterate cases, and particularly those obstinate to the sulphur treatment, the arsenical preparations are excellent prophylactics.

Let practitioners on their part observe and experiment, but let them do so in cases of true and legitimate asthma, and not in those of dyspnœa associated with an organic affection of the heart, large vessels or lungs. I hope their researches will confirm the views both of pathology and therapeutics which I have propounded in this memoir.

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NOTE BY THE TRANSLATOR.—The symptoms of what Marshall Hall calls "hay asthma," or "asthma æstivum," are analogous to what Dr. Duclos considers to be eczema of the bronchia, coryza, affecting the conjunctiva of eyes, the nasal mucous membrane and bronchia, relieved by sea air and aggravated by warm weather. Ordinary remedies, he says, fail in the treatment of this. The pathology of it, or its identity with cutaneous affections, appears not to be suspected by him.

Is not the affection known by the name of "rose cold," and not uncommon in New England, and so distressing and pertinacious, an eruption in the bronchia? May not the curative means, so highly extolled by Dr. Duclos, be appropriately adopted in these cases?

TRIAL FOR ALLEGED MAL-PRACTICE.

[THE following interesting account of a trial for alleged mal-practice is from the *Cortland* (N. Y.) *Gazette* of the 4th inst.—EDS.]

A very important suit was tried at the last Circuit Court held in this village last week—Judge Campbell presiding. It was the case of Ansell Grinnell against Dr. Lewis Riggs. The action was brought to recover damages for the alleged mal-practice of the defendant, as a surgeon, in the treatment of the broken arm of the plaintiff. In June, 1858, the plaintiff, who resides in Spafford, in the County of Onondaga, was travelling with his team along the road leading from Homer to Cortland, and as he approached the railway crossing, a train was passing, his team became unmanageable, and he was thrown out, and came in violent collision with the locomotive, whereby his left arm was broken just above the elbow.

He was taken to the house of Henry Brockway, near by, and there the defendant set the arm, and attended upon its treatment, for about four weeks.

Up to the expiration of that time, it seemed to be doing well. Union of the fractured parts was apparently in progress. The plaintiff was able to leave the house and walk about. He was desirous of returning to his residence in Spafford, and there to be attended by his family physician, Dr. Morrill.

The defendant introduced evidence tending to show that he remonstrated with the plaintiff against his going home at that time; that it would hazard the safety of his arm, and that he had better remain until it was more firmly united. Notwithstanding this advice, the plaintiff performed the journey home. His arm was afterwards treated by Dr. Morrill, of Spafford. In the succeeding month of August, it was ascertained that the bones were not united.

Evidence was given tending to show that after the plaintiff had returned to Spafford, and after the defendant had ceased to attend upon the arm, it was dislocated by an imprudent twisting of the fore-arm, and every subsequent effort at re-union failed.

The defendant introduced upon the trial several of the most eminent and experienced surgeons in this section of the country, and proved by them that his treatment of the arm was in accordance with the directions of standard authors, and the most thoroughly approved practice.

The trial occupied four days. The case having been ably summed up by the council for the respective parties, his Honor, Judge Campbell, delivered the following charge to the jury:—

"There is nothing peculiar in the obligations which rest upon the physician and surgeon in the performance of the professional duties which they are called upon to discharge. Those same obligations rest upon the lawyer, upon the mechanic, and indeed, upon any one who, for compensation, undertakes to render a service or to perform labor for another. As the physician and surgeon deal directly with the human body, and thus in a measure hold, as it were, the issues of life and of death, it is not only reasonable and right, but it is natural, that their conduct and treatment of those entrusted to their care should be observed and noted with watchful anxiety. And thus it is that while the obligations which the law imposes upon them, are no more severe than upon other professions and pursuits, yet, for the reasons mentioned, those obligations are more frequently sought to be enforced in courts of justice.

"The obligations of the surgeon do not come up to a warranty of a cure without a special contract to that effect. His implied undertaking is that he possesses ordinary medical learning and skill, such as the body of the profession possesses in the region of country where he lives, and that he will exercise that skill with care and diligence; that he will adopt approved modes of practice and treatment, and, in short, will exert his best ability to effect a speedy and thorough cure. If he has come up to these requirements, then the surgeon has done his duty—has discharged his obligations; and if he has acted with fidelity and honesty, he is not responsible for the result, unless by an express agreement undertaken to effect a cure.

"When the physician and surgeon adopt one approved mode of practice or treatment, such as is advised and recommended by men eminent in the profession, they are not to be held responsible for not adopting another practice or treatment which other eminent men advise and recommend, even though the jury should think that the practice and treatment which was not followed, would have been the best under the circumstances of the case. In other words, the physician and surgeon is not an *insurer*, and is not responsible for an error of judgment where he follows one approved mode of treatment instead of another, also approved.

"Applying, then, these principles to the case on trial, the first question is, did the defendant, when called on to treat the fractured arm of the plaintiff, agree, by special undertaking, that he would make him a sound limb? In other words, did he warrant a perfect cure, in three or four weeks, as claimed by the plaintiff? If he did so warrant, then it is quite clear that such warranty has been broken, and the defendant is liable.

"If there was no warranty—if the defendant's obligations are such only as the law imposed upon him when he undertook the treatment of the case, then, did he bring to that treatment the ordinary learning and skill of his profession, and did he apply that skill and learning with care and diligence, and did he adopt an approved mode of treatment; following the case with fidelity and honesty of purpose, up to the fourth of July, 1858, or up to the time when he was discharged from further attendance? If so, then the defendant did his whole duty, and is not to be held liable to the plaintiff for damages in this action.

"From these general propositions and statements of the law of the case, you will see that the verdict which you will give must depend, in a great measure, if not entirely, upon the credit which you shall give to the plaintiff and his witnesses and to the defendant and his witnesses.

"Coming, then, to the treatment of the plaintiff, while under the defendant's care at Brockway's, the evidence on the part of the defendant, as given by eminent professional men, tends to show that that treatment, so far as splints, bandages and daily dressings are concerned, was correct. All the witnesses, however, as I understand them, agree that if there was a continued and daily pulling of the arm, reaching down to the time when the plaintiff left Brockway's on the 3d of July, then such pulling and extension would tend to keep the bones from uniting, and would be unskilful treatment and bad practice. Now, how was the fact? The plaintiff and his witnesses give evidence tending to show such pulling and extension; and, on the other hand, the defendant and his witnesses give evidence to the effect that the pulling and extension ceased after the first few days, and that no injury arose from that treatment. Much evidence has also been given on the question whether at the time the plaintiff left Brockway's, or up to the 4th of July, the healing or union process had been commenced, and whether, up to that time, there was any reason to apprehend that a union would not be effected.

"You must examine and weigh the evidence and determine the case according to your best judgments. You should do so without favor, rendering equal and exact justice. If the defendant has neglected his duty, and by and through his fault the plaintiff has lost the use of his arm, say so by your verdict. If, on the other hand, he brought to the treatment skill, care and diligence, and followed approved modes of practice, and without his fault the bones have not joined together, then it was the misfortune, or it may be the fault of the plaintiff, and your verdict should be for the defendant."

The jury, after an absence of about half an hour, rendered a verdict for the defendant. The result of this trial is a noble vindication of the venerable Dr. Riggs, as a surgeon. His bearing throughout, showed not only his eminence in his profession, but his integrity as a man.

A CASE OF OSSIFICATION OF THE MUSCLES.

By William Skinner, M.B., Lond., &c., of Manchester, Eng.

This singular case is that of a boy, 13 years old, the second of eight children of healthy parents. He was quite healthy until about six years ago, when a swelling was noticed at the back of his neck, without any known cause. "This disappeared in about a week, another being observed behind the right shoulder. Three weeks later the arms gradually became so stiff that for about three months they were firmly fixed, and the boy was obliged to be fed. He, however, somewhat improved in this respect, and for some time past has been able to feed himself, although with much difficulty. From that time to the present, various lumps have formed in different parts of the body, these being principally about the spine and chest; and whenever the boy receives a blow it is followed by a similar swelling. Their appearance is preceded by pain, tenderness, and slight feverishness.

"The condition of the boy at the present time is as follows:—He stoops somewhat; the shoulders are contracted; there is no motion in the right joint, and very little in the left; the arms cannot be extended, and are in a semi-flexed position, crossing the abdomen. The chest is narrow, very much flattened on either side, at the junction of the ribs with their cartilages, and these somewhat nodulated. There is no movement of the chest with respiration. The abdomen and lower extremities are well developed, the latter straight, without signs of rickets. There is no movement in the spine, and the scapulæ are fixed; the buttocks and lower extremities present nothing abnormal. On manipulation, a number of small projections are felt over the ribs. The right pectoral muscles are completely fixed, and converted into a hard, bony substance. The lower edge of the greater can be traced from a nodule below the right nipple, crossing the axilla, forming a hard and sharp ridge, which is continued into the biceps as far as its insertion into the radius; a number of little bony nodules may be felt along its course, and a long irregular splinter of bone behind it. The muscles of the forearm do not seem to be affected. On the left side there is much the same condition of things as on the right, except that the muscles of the forearm are here beginning to be more or less fixed, and there exists a long, sharp, bony ridge from the outer condyle to about two thirds of the length of the forearm.

"Posteriorly, on the left side of the neck, and apparently in the trapezius immediately after its origin from the occiput, is a projection of hard, bony substance, about the size and shape of a pigeon's egg. Lower down, between the angle of the scapula and the spine, is a large, hard, irregular mass. In the dorsal region, at about the tenth and eleventh vertebræ, where the trapezius takes its rise, and apparently formed in the angle of this muscle of the left side, is another hard and somewhat movable mass. It is angular in shape, and extends upward on the side of the spine about one and a half inches, and outward and upward, in the lower fold of the muscle, about one inch. Moreover, in tracing the lower edge of this muscle to its attachment to the scapula some hardness is felt, and here and there sharp spiculæ of bone-like matter. On the right side, about two inches below the lower angle of the scapula, is another hard and irregular projection, about the size of a large egg, the last which has made its appearance; apparently it is incorporated in the lower edge of the latissimus dorsi. In the lumbar region, on each side, hard, bony plates occupy both spaces. The buttocks and lower extremities are quite free from disease, excepting one small nodule, about the size of a common nut, situated over the right os calcis, at the insertion of the tendo Achillis."

This boy exhibited no other structural or functional abnormity. He had taken iodide of potassium, but without any beneficial effect.

"Examples of this peculiar disease may be found recorded by Mr. C. Hawkins in the *Medical Gazette*, 1843 and 1844; by Dr. Rogers in vol. xiii. of the *American Journal of the Med. Sciences;* by Dr. Wilkinson in the *Medical Gazette* for 1846; by Dr. Testelin in the *Gazette Médicale de Paris* for 1839. In the museum of the Royal College of Surgeons of England there is a fine specimen of the disease, the description of which is given in the *Pathological Catalogue*, vol. v., p. 138, No. 3367."—*Medical Times and Gazette*, April 20, 1861.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JULY 18, 1861.

The following letter from Dr. Martin contains interesting information with regard to the appearance of variolous disease among the troops at Fortress Monroe. Its statements fully confirm the impression which we expressed in our editorial of the 4th inst., that the newspapers were making a great deal out of what was, in fact, not a very serious matter. We print the letter as it is written, reserving to ourselves the privilege of adding a few comments at its conclusion.

Camp Butler, Newport's News, Dept. of Virginia,
July 10th, 1861.

Messrs. Editors,—I notice in the number of your Journal of July 4th (received yesterday), an editorial in regard to the vaccination of the troops from Massachusetts. The article referred to deals in such phrases as "We certainly THINK, *so far as we are acquainted with facts,*" &c.; "We have no reason to doubt," and "We have little doubt," &c. &c. As there is no internal evidence that the editorial alluded to was written with any authority or foundation beyond that beautiful implicit faith that every true Bostonian seems to have, that everything is done in the very best possible way—because it is done in Boston, I do not see fit to reply further than to state that at the time when I offered, in a letter to Governor Andrew, to vaccinate all the recruits who thenceforward should leave Massachusetts, gratuitously, supplying the lymph for that purpose on the same terms, the troops were not being nor had they been properly protected, by vaccination even, much less by RE-vaccination. To a certain limited extent *vaccination* had been done, but with no method, or anything even in a remote degree approaching thoroughness ; re-vaccination not at all. What has been done since, what is now being done, I have nothing to do with. If every man recruited in Massachusetts is now protected from smallpox and varioloid, I shall rejoice exceedingly to know it, and especially so from a feeling that to a humble and limited degree I have had something to do with the attainment of the gratifying result. Allow me to suggest that the rejection of a recruit who does "not present satisfactory evidence of having been *vaccinated*," seems remarkable, intimating, if such has been the fact, a paucity of the *materiel* requisite to the performance of that trivial operation, and the expression of the idea (which is inferred) that a *single* vaccination, however remotely performed, constitutes a full protection from variolous disease, is evidence of a very striking want of information as to the vast weight of *modern* authority on that important subject.

About the "appointing a special medical officer over the heads" of others, I know nothing. I asked no such appointment. Of the infinite necessity of a general inspection of all the troops in the United States service, with a view to methodical vaccination, the duty to be done by some one or more persons *not* connected with the regiments, I know a good deal, and on a future occasion, in another place, shall perhaps have a good deal to say.

The reason why I did not give you any account of the varioloid, &c., in my letter, was that said letter was written two or three days after my arrival at Fortress Monroe, and before I knew anything definitely myself of the matter. Cases of contagious disease are rigidly excluded from the General Hospital, from which I hardly stirred during that time. As to giving you a "full report of the number of cases," &c. &c., I cannot do it—first, because I am not yet in possession of all the facts requisite for a "full report;" and secondly, because, when I become so, such a report must, in all propriety, be *first* made to the commanding officer of this department, and not through the columns of a professional Journal. I have no objection, however, to giving you some facts which I have ascertained by actual observation. I came first to Camp Butler, as that is the encampment most distant from the Fortress, intending thereafter to visit the camp at Hampton Bridge, and finally visit and inspect the troops at the Fortress. I found at Newport's News five regiments in camp—the Seventh New York Volunteers, the Fourth N. Y. Volunteers (Scott Life Guard), the First Vermont Volunteers, the Fourth Massachusetts (replaced before my inspection reached them by the First N. Y. regiment—Allen's), and the Ninth N. Y. (Hawkins's) Zouaves. Two of these regiments (First and Ninth N. Y.), were thoroughly protected before leaving home ; the first in consequence of the appearance of varioloid among the men, the second in accordance with an order to that effect from

Surgeon General Vanderpoel. The First Vermont is a three months regiment, and was not vaccinated before coming here, but on the appearance of varioloid was as thoroughly protected by Dr. Sanborn (surgeon of the regiment and post-surgeon of this encampment) as possible with the limited supply of lymph at his command. Of this regiment I vaccinated a few members, but in view of the facts that its term of service has very nearly expired, and that its camp is very remote from that part of the post where the smallpox first appeared and to which it has hitherto been limited, I made no formal inspection of it. The entire matter was left to my judgment, and I did not consider such inspection necessary. The remaining two regiments were thoroughly inspected by me. An exact register was kept of all essential facts relating to each individual, and of the results of vaccination when performed. In both these regiments a large number were found who had never been vaccinated at all, several hundred in whom it had not been done since infancy, and a great many where the evidences of previous proper protection were not satisfactory.

It may be instructive for the gentlemen who think their method of entire reliance on the regimental surgeons so perfect, to be informed that in one of the two last regiments, the surgeon thereof, in answer to a requisition from the commanding officer, made reply that his regiment was MOST THOROUGHLY PROTECTED. I found, on inspection, that *two* of his men had been vaccinated since enlistment (one with effect, the other without); that fifty-one of them had *never* been vaccinated at all; and of the remainder, over four hundred not since infancy. As to the varioloid, I would say that five cases thereof have shown themselves among the men of that regiment, to which the disease has hitherto been confined, and to which it is *now* probable it will remain limited, and a sixth (of severe variola) in an unvaccinated negro servant living in the same camp. As to the fatality, I am happy to say there has been none. The hot weather, and the facts that the disease appeared first at the extreme left of the encampment, and that the cases were at once carefully isolated, account sufficiently for the limited degree to which the contagion has extended. Any person familiar with variola, need hardly be told what the result would probably have been, had it shown itself in cold weather, in two such regiments lying in contiguous camps.

It is not at present necessary for me to say more of the existence of variolous disease here, which would seem to be shrewdly doubted by the writer of the editorial alluded to. And I think enough also has been said to vindicate the wisdom and foresight of Gen. Butler's order for a thorough inspection of his command, with a view to preventing the spread of the disease. I am now preparing, with the assistance of a secretary, an elaborate report to Gen. Butler, which, embracing statistical facts, arrived at in the course of this humble commencement of, I trust, a methodical system of vaccination, not only of the army, but of the people of the United States, must, however imperfect, possess interest to the profession, and will therefore be printed. HENRY A. MARTIN.

In the first place we would remark, with regard to our former editorial, that it was written with a full knowledge of the facts, and was called out by what we considered, and still consider, the undeserved severity of the comments of the New York *Medical Times*, and the daily press, on the alleged neglect of the medical authorities of Massachusetts. The natural inference from these remarks, copied widely in the daily papers, was, that the Massachusetts troops were at that time suffering from a loathsome disease, through the culpable negligence of those who might have prevented it, and that in consequence of this fact, a special officer was needed, and had been despatched to Virginia to repair the neglect, by instituting a thorough vaccination. It is quite interesting to see, therefore, that of the *six* cases of variolous disease, all that had occurred, according to Dr. Martin, up to the date of his letter, *not one had appeared in a Massachusetts regiment!* Five of them were in one of the New York regiments (will the New York *Medical Times* please note this?), and the sixth was that of an un-vaccinated negro, probably one of the *contraband*. Truly, this does not make out a very urgent need for extra medical services.

With regard to the 1st Vermont regiment, it appears that Dr. Martin, in view of the fact that it is a three months regiment, "did not consider an inspection necessary"! Well may we pause with astonishment. Would any one believe that all the regiments from Massachusetts at the time in and about Fort Monroe were also three months men? and men, too, whose term of service would expire before that of the Vermonters? Yet such is the fact, and these are the soldiers who were so shamefully neglected by our State authorities! These were the men, whose regimental surgeons were not competent to inspect, or had not the means of vaccinating them! These were the men for whose special vaccination Dr. Martin was summoned to Fortress Monroe!

We have not one word to say against the importance of universal re-vaccination in the army. On the contrary, we think it of immense importance. As to whom it shall be done by, it is not important now to inquire. We hope it will be done, and that thoroughly. But let it not be said that smallpox has made its appearance among the troops, as a consequence of the neglect of its performance on the part of our State, for this is simply not true.

We cannot refrain from recurring to the fact that Dr. Martin's offer to vaccinate the Massachusetts troops was made *after all the three months troops had left.* The troops subsequently enlisted were, of course, under the orders of the United States government, after they were mustered into service, and Massachusetts had nothing more to do with them. The offer of gratuitous services was accompanied by commendable expressions of patriotic motives. Dr. Martin was asked, however, if he would furnish vaccine to be used for the benefit of the troops in Boston harbor, but he peremptorily refused to supply it!

We are also authorized to state, that an order was issued by the Commander in Chief, in accordance with a vote of the Medical Commission passed on the 2d of May, that all soldiers enlisted and accepted as volunteers be vaccinated, unless they can procure evidence of having been vaccinated within five years; and we have reason to believe this order has been faithfully carried out. As to Dr. Martin's inferences from our remark that orders were given that unvaccinated persons offering for recruits should be rejected, we would say, in explanation, that of course such a rejection was to be only temporary. Recruiting was going on at many different points, and the officers were directed in all such instances to give proper notice at headquarters, and vaccine would be supplied immediately.

On the whole, then, we see no reason to retract the opinion expressed by us two weeks since, that in this matter "it seems as if somebody had succeeded in creating a good deal of blaze and smoke, out of very little straw."

The second letter from Dr. Martin, written from Fortress Monroe, we have not space to print the present week.

NEW ANÆSTHETICS—THEORY OF THEIR ACTION.—The following letter is of interest at the present time, in connection with the new anæsthetic announced in our last.

Messrs. Editors,—Substitutes for ether, as anæsthetic agents, are frequently proposed, and some of them have been practically introduced, with some success. None, however, surpass ether in the two most important qualities of efficiency and safety, and there can be no doubt that with respect to safety, ether is far preferable to any and all anæsthetics thus far discovered.

It may prove interesting to the profession, to inquire into the mode of action of the class of bodies known to produce anæsthesia, when inhaled. This subject has been very carefully studied by me from the outset of anæsthetic practice, and with a view to the discovery of some general law.

The first impression among physicians was that the anæsthetic state was merely one of temporary intoxication.

Secondly, the theory of high excitement, followed by corresponding collapse, accounted for the phenomena. Dr. John C. Warren took, at one time, this view of the matter, and spoke of etherization as "devouring the sensibility by high stimulation, and hence a corresponding nervous depression" which was the anæsthetic state. Others have supposed that etherization produced a partial asphyxia; hence the expression early made use of by some of our surgeons, that there was "little difference between hanging, drowning and etherizing."

It has also been alleged that ether absorbed into the sanguineous circulation affects directly the nervous filaments, either at their origin in the medulla spinalis, or in their distributed extremities, or in both these parts. In support of this allegation, it was cited that the direct application of ether to an exposed nerve *destroyed* its sensibility. By the italization of that word, I call attention to the difference between the anæsthetic state of temporary suspension of sensibility, and the destruction of it; for the nerve acted upon directly by ether, does not recover its powers, but is permanently paralyzed.

Another state of the circulation has been observed, which it was hoped would give some clue to the action of anæsthetic agents,—namely, that of slackening, and even temporarily wholly suspending the circulation of blood in the capillary or extreme vessels. It was supposed that by thus cutting off a supply of circulating blood-stimulus to the sentient extremities of the nerves, sensation was temporarily suspended. The commencement of insensibility in the remote extremities, the feet, legs and hands, seems to indicate that sensation was suspended at those points first.

The French Physiologists, Flourens and Longet, are of opinion that the effects of anæsthetics commence, and primarily act on the great nervous centres, the medulla spinalis and medulla oblongata; and that if the full effect reaches the bulb of the medulla death will take place from total suspension of all the vital functions of the body.

A more chemical explanation of the action of anæsthetics, is that they all abstract oxygen from the blood, and hence reduce its peculiar stimulating powers on the nerves, and that some of them leave poisonous products, while those left by others are innocuous. Thus, as we have formerly stated, chloroform or the ter-chloride of formyl abstracts three equivalents of oxygen from the blood, but, at the same time, unfortunately it deposits, in exchange for the oxygen, three equivalents of chlorine.

Bi-sulphide of carbon, one of the most terrible anæsthetics ever proposed, the dangerous effects of which I have experienced, and have warned the public about seasonably, acts as a powerful de-oxidizer of the blood, both the carbon and the sulphur abstracting oxygen, the first producing carbonic oxide or carbonic acid, while the latter forms sulphurous acid. Carbonic oxide and sulphurous acid are poisons, as is also chlorine, before mentioned.

All the acidiferous ethers when decomposed, as they are, in the organs of respiration and circulation, leave their acids in combination with the blood; hence, nitrous and nitric ether are known to destroy life, and hydro-chloric ether and chloride of hydro-carbon undoubtedly act in the same way, and injure the quality of the blood. Acetic ether is not objectionable, since an organic acid is easily decomposed in the processes of respiration, and is removed in the form of carbonic acid and vapor of water, usual products of normal respiration.

Sulphuric ether, as it is improperly called, since it does not contain any sulphuric acid, is a pure hydro-carbon, with one equivalent of oxygen$=C_4H_5O$. When decomposed by the action of the blood, it may be converted into aldehyde, acetic acid, and lastly into carbonic acid and water, no fixed product remaining in the blood, but all able to be removed by respiratory action. The odor of the breath of a patient who has been etherized, shows that there are exhaled the oxidized products of the ether, and it is known by analysis that a much larger proportion of carbonic acid is exhaled from the lungs during the etherized state, than in the normal condition of the system.

Without finally adopting any theory of the chemical and physiological action of anæsthetics generally, we may, perhaps, be allowed to call attention to a general law, namely, that all very volatile hydrocarbons act as anæsthetics like the others. Thus, it has long been known that benzine, benzole, oil of turpentine, naphtha, when inhaled, will all produce the anæsthetic state. The highly volatile oils of coal tar, likewise, possess anæsthetic properties, and one which has recently been tested in surgical practice, known as keroselene, a highly volatile naphtha, seems to be the least offensive of them. It is evidently a very pure hydro-carbon, analogous to highly rectified naphtha, and does not contain any oxygen, as is proved by its property of preserving potassium from oxidation, when it is immersed in it. The first samples of keroselene which I tested, two years ago, proved quite irritating to the organs of respiration, but I have learned recently that a purer and more volatile product has been made at Mr. Downer's works, though I have had no opportunity of testing it practically.

It is obvious that there are two or more volatile oils in the keroselene of commerce, and they are separable by graduated distillation.

Some care, therefore, is requisite in the preparation of an uniform product; one which may be properly the subject of experiments by inhalation. I would observe that no analysis has yet been made of the keroselene oils. CHARLES T. JACKSON, M.D.

DR. G. B. BALCH, of North Lawrence, N. Y., relates, in the *Amer. Jour. of Med. Sciences* for July, a case of gun-shot wound, in which a leaden ball remained in the walls of the heart for twenty years. The subject of the accident was shot in 1840, when he was 14 years old, the ball entering "the right shoulder, through the upper border of the trapezius muscle, about two inches from the acromion process." Little hæmorrhage or local disturbance took place, and in six weeks the boy was at work. In 1845 he had pneumonia of the right lung, and in 1860 pneumonia again, with increased action of the heart, and dyspnœa, which ended fatally, the right arm and hand becoming purple and cold two days before death.

On post-mortem examination, the right internal jugular was found enlarged, and the right external jugular entirely closed. In the right subclavian artery, at the thyroid axis, was a large ossific deposit. The heart was found very soft and flabby, two or three times its natural size, had undergone fatty degeneration, and a hard lump was felt in the lower part. This lump proved to be in the wall of the right ventricle, with no scar outside, and on cutting down upon it, the bullet was found imbedded inside. The pericardium was very adherent, especially on the right side of the heart.

THE following letter having been shown us by our friend DR. LUTHER PARKS, Jr., we asked it for publication, for the benefit of those who contemplate taking a medical commission in the service of the United States.

At the time Major Cobb began to organize his battery of Light Artillery, Dr. Parks accepted an appointment as Surgeon from that gentleman, with the desire and intention of engaging in active service for a few months, relying upon what he considered good authority, that he could resign his commission whenever his convenience should require. He was therefore surprised to find, a short time since, that he was expected to sign a paper contracting with the State of Massachusetts to enter the service of the United States for the term of three years, or until otherwise discharged. Dr. P. at once consulted the United States mustering officer in this vicinity, Lieut. Amory, who gave him the following information, viz., that staff and commissioned officers, as well as privates, were expected to sign the abovementioned paper; that those signing it were absolved from all obligations imposed by it on receiving a discharge from the Federal Government; that an officer could resign his commission, and his resignation would be accepted, at any time; but, that in time of war, it was not considered creditable for any officer to resign except upon some important and unforeseen emergency. Dr. Parks, therefore, being unable to be absent from home for a longer period than a few months, found himself obliged to retire from his post in a corps in which he had become much interested, and with whose members he had sustained especially pleasant relations.

We are happy to say that Dr. Parks has obtained a very able substitute in Dr. David P. Smith, of Springfield.

BOSTON, June 25th, 1861.

SIR,—Having been applied to by Dr. Luther Parks, Jr., for information in regard to the obligation of officers tendering their services to the General Government, under the call for three years volunteers, I stated to him that in my opinion—which I think is in accordance with the views of the General Government—no officer should make offer of his services, unless, at the time, he is willing and able to remain in service for the full length of time specified. I have accordingly advised Dr. Parks, on his informing me that circumstances would compel his presence at home before the expiration of the three years term, not to offer his services for a position which could be filled by some one else so situated as to be able to take upon himself the obligation to serve for three years.

Signed by Lieut. AMORY, U. S. Army Mustering Officer,
and addressed to Major COBB, Comm'g Light Artillery.

BERKSHIRE DISTRICT MEDICAL SOCIETY.—This Society held its annual meeting at Lenox, on Wednesday, June 26th, when the following officers were unanimously re-elected for the ensuing year, viz. :—*President*, Clarkson T. Collins, M.D., of Great Barrington; *Vice President*, Timothy Childs, M.D., of Pittsfield; *Secretary*, R. Cresson Stiles, M.D., of Pittsfield; *Treasurer*, Abner M. Smith, M.D., of Pittsfield.

Berkshire county is one of the largest in the State, occupying the extreme western portion. Its natural scenery among the mountains has long been a subject of interest to travellers. It contains a medical college, which is well sustained. The district society is composed of members both in and out of the county. Medical men residing in the contiguous portions of other States, find it more convenient to belong to the Berkshire Society, than to those of their own States; hence, the district society contains many more members than are represented in the State society—numbering about seventy. They hold their meetings on the fourth Wednesday in each month, at different parts of the county, but mostly at the medical college in Pittsfield. These monthly gatherings are not only of a highly interesting and instructive character in a scientific way, but are also pleasant in a social manner, as on every occasion a dinner is furnished by some member. The July meeting is to be held in Great Barrington, when the Society will partake of the hospitality of its President, Dr. Collins.

A MEETING of the Censors of the Massachusetts Medical Society for Suffolk District and the Society at large, will be held at the house of Dr. W. E. COALE, in Staniford Street, on Wednesday, 31st inst., at 4 o'clock, P.M.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, July 13th, 1861.

DEATHS.

	Males.	*Females*	*Total.*
Deaths during the week,	44	35	79.
Average Mortality of the corresponding weeks of the ten years, 1851-1861,	38.6	33.7	72.3
Average corrected to increased population,	..	..	80.7
Deaths of persons above 90,	..	..	..

Mortality from Prevailing Diseases.

Phthisis.	Chol. Inf.	Croup.	Scar. Fev.	Pneumonia.	Variola.	Dysentery.	Typ. Fev.	Diphtheria.
11	12	0	5	0	0	2	0	0

METEOROLOGY.

From Observations taken at the Observatory of Harvard College.

Mean height of Barometer,	29.931	Highest point of Thermometer,	97.
Highest point of Barometer,	30.161	Lowest point of Thermometer,	54.10
Lowest point of Barometer,	29.702	General direction of Wind,	Westerly.
Mean Temperature,	77°.1	Am't of Rain (in inches)	0.931

ERRATUM.—In last week's Journal, page 493, in the table at the bottom of the page, the third ward mentioned should be *Fever* instead of "General."

PAMPHLETS RECEIVED.—The Modus Propagandi of the Human Species, physiologically explained. By John O'Reilly, M.D., New York.—Annual Report of the New Hampshire Asylum for the Insane.

DEATHS IN BOSTON for the week ending Saturday noon, July 13th, 79. Males, 44—Females, 35.—Accidents, 3—apoplexy, 2—disease of the brain, 2—cancer (of the uterus), 1—cholera infantum, 12—cholera morbus, 1—bilious colic, 1—consumption, 11—convulsions, 7—drinking ice water, 1—dropsy, 1—dropsy of the brain, 2—dysentery, 2—scarlet fever, 5—infantile diseases, 2—intemperance, 2—disease of the liver, 1—marasmus, 6—measles, 1—paralysis, 3—peritonitis, 1—premature birth, 2—suicide, 1—sunstroke, 2—tabes mesenterica, 1—teething, 1—unknown, 5.

Under 5 years of age, 45—between 5 and 20 years, 4—between 20 and 40 years, 11—between 40 and 60 years, 14—above 60 years, 5. Born in the United States, 57—Ireland, 18—other places, 4.